

## **MEETING MINUTES**

### **Joint Broward Water Resources Task Force and Technical Team**

Friday, May 29, 2009, 11:00 AM

Broward County Government Center West  
1 N. University Drive, 2<sup>nd</sup> Floor Hearing Room  
Plantation, Florida 33324

#### **Summary:**

The meeting began at 11:07 AM. Chair Estenoz called the meeting to order and indicated that she anticipated having a quorum shortly. She then called for roll call (see attendance below).

The Chair said she would go over the agenda and discuss what would occur today. She then introduced the subject of water conservation indicating that it was an important topic and that we need to understand what role it can play in our overall water supply strategies. She said we were privileged to have guests from Lee and Collier Counties present to talk about their water conservation programs. She said there would be no Technical Team Report as both Mr. Perez and Mr. Brown were unavailable. She mentioned next week's joint meeting of the Broward and Palm Beach Water Resource Task Forces at Coconut Creek and asked Commissioner Aronson to tell people where the facility is. Ms. Estenoz said it would be an important meeting and an opportunity to meet Broward's counterparts on the Palm Beach Task Force. There was a motion to approve the minutes of the May 1 Broward Task Force meeting, which was seconded and approved unanimously.

The Chair introduced Patricia DiPiero from Lee County Utilities. Ms. DiPiero introduced statistics about the utility and indicated that they had made some acquisitions and expected to incorporate additional utilities. They have 6 water treatment plants with a total capacity of about 42 million gallons per day (MGD), 3 traditional water supply plants, 2 alternative water supply (AWS) plants, and one combination traditional/AWS plant. Per capita usage is 118 gallons per day. Leakage accounted for about 5% of usage in 2008. Ms. DiPiero then went over Lee County's water conservation approach. Lee County does not use standard water conservation tools such as showerhead replacements – they don't think of the end-user, they look at it from the source – saving the traditional sources. They have a public outreach program in the schools with third graders. They also have a speaker's bureau, website, community access spots, and bill stuffers. Lee County has had a 2-day per week irrigation ordinance since 2005. She discussed their water shortage block rate system. The big issue for Lee County is alternative water supply. 30% of the utility's water supply is from AWS. She discussed the Lower Hawthorn Formation, which is brackish, as being part of the Floridan Aquifer. Expansion plans include further use of the Lower Hawthorn. She also discussed the Olga water treatment plant and discussed operational problems with associated inconsistent flows and algae blooms. The Chair interrupted momentarily to talk about the relationship of the Olga plant to Lake Okeechobee.

Ms. DiPiero also mentioned saltwater intrusion issues. Chair Estenoz talked about the different challenges they (Lee County) face, including estuarine issues, and there was some discussion of nutrient loads and their sources. Ms. DiPiero continued onto a discussion of an

Olga Water Treatment Plant Aquifer Storage and Recovery (ASR) System. The results have been mixed with respect to ASR in Lee County, depending on where in the County it has been tried. At the Olga plant, recovery got better as they tested the system, but then an arsenic issue emerged. There was discussion of the arsenic issue associated with ASR and the politics involved with permitting for groundwater and surface waters. The Corkscrew ASR system has had better success than the Olga system. Chair Estenoz pointed out that the original Everglades restoration plan called for hundreds of ASR wells and this current discussion today was indicative of some of the issues that might have occurred should this approach have been taken. There was further discussion of the levels of treatment required for injected and recovered waters. Next, Ms. DiPiero discussed the future of ASR in Lee County, indicating that untreated surface water and groundwater, including stormwater and reclaimed water, are being considered. Currently, water injected into ASR wells comes from a treatment plant and there is some thought that this might mobilize arsenic. Lee County is also looking at conjunctive use ASR which is storage of multiple sources of water and aquifer storage transfer recovery which would be injecting at one location and recovering in a different location. Lee County is currently undertaking an integrated water master plan process. Ms. DiPiero concluded with a discussion about reclaimed water, and existing and potential projects. The utility recognizes they will need supplemental reclaimed water. There was a brief discussion about water quality in canals and the differences between Lee County and Broward County. There was a discussion of utility cooperation as Lee County imposed the 2-day per week irrigation schedule and how that compared to similar procedures in Broward County.

The next presentation was by Paul Mattausch, Director of the Water Department for Collier County. The Chair asked for cooperation from the remaining presenters to limit their presentations to afford the visiting presenters ample time. Mr. Mattausch presented Collier County system statistics and a schematic of Collier County hydrogeology, which he explained in some detail. He discussed the injection well system and the need to monitor upward migration. He pointed out that they have constructed no fresh water sourced potable facilities since 1992. He mentioned that while conservation is important, it alone does not take the place of all the other pieces that need to be incorporated while considering water supply in southwest Florida. 24 MGD of their supply comes from freshwater. The other 28 MGD comes from AWS. He explained that the 2008 demand was 35.7 MGD. They do not use the term "reclaimed", but the term "irrigation quality". Collier County average water use is 1/3 freshwater, 1/3 brackish, and 1/3 irrigation quality (reclaimed) water. They are proud of the fact that they have the highest per capita rate of reuse in Florida – greater than 95%. They do not like to put the irrigation quality water in injection wells which may be necessary during heavy rain events. Since 1992, land development codes have required that three water pipe systems be put in – water, wastewater, and purple pipe. They have more customers that would like irrigation quality water, but they don't have enough to provide. Year round 18% - 20% of their water goes to irrigation. Conservation limits the amount of irrigation water quality that is made available. On average it takes 4-5 residential units to produce enough water for 1 residential unit's irrigation/landscaping needs. He discussed the year-round irrigation ordinance which is 3 days per week, 8 hours per day, which is more restrictive than the District's 2-day per week restrictions, which allows 18 hours per day. They have an active rain sensor switch retrofit program. Collier County is looking at the number of private wells in operation, which are estimated to be about 300 within their service area. He then talked about the County's inverted block rate structure and showed the rates. He stated that if people want to use it, they are going to pay for it. Mr. Mattausch then

discussed their conservation programs, discussing their land development code which requires construction of dual distribution systems, low-flow fixtures, xeriscape landscaping, and their leak detection and meter replacements program. About 6% of water use is attributed to leaks. He then discussed their comprehensive water conservation education program, and potable per capita water consumption and how it has gone down over time from 202 gpd in 2000 to 134 gpd in 2008. He presented the total water picture which included the irrigation quality per capita water consumption, which brings that number up to 211gpd for 2008 (134 gpd potable, 77 gpd irrigation quality). There was a discussion about the differences between Collier County and Broward County with respect to how the water management systems operate and total costs associated with treatment and distribution of reclaimed water. There was also some discussion of water quality in canals.

The Chair reminded the Task Force that today's discussion was about water conservation and while this discussion about water quality was needed, they needed to focus on water conservation today. She introduced Jane Bucca of SFWMD and asked her, in the interest of time, to shorten her presentation. Ms. Bucca agreed to forego her Powerpoint presentation and she briefly discussed the guide produced by Conserve Florida at the University of Florida which is part of a comprehensive Water Conservation Program. She recognized Tamarac as being a willing partner for utilizing the new revised guide. She praised Broward communities for their participation in the Supplemental Water Savings Incentive Program.

The next presentation was by Toni Edwards of Broward County's Water Resources Policy and Planning Program. Ms. Edwards shared a presentation that she previously had made to the Broward County Water Advisory Board. She discussed the Broward Water Conservation and Incentives Program with the objectives of encouraging a stronger water conservation ethic and providing incentives and resources to residents. She explained how the campaign would work and how costs could be shared for this voluntary program. There was a discussion of how costs would be shared. It was mentioned that this would be a FY 2011 budget program and envisioned to be a 3-5 year program. There was mention that many cities are doing something similar and a brief discussion ensued on how an outreach campaign might be made. The Chair asked if this is a concept the Task Force should support. There was some discussion about the current budget crisis and how a program like this might be supported given other constraints/issues that need to be dealt with. Dr. Jurado summarized the original purpose for the proposal and the economies of scale inherent in the approach. She explained how the project would be moved forward through the process and how it would be shared with the Broward League of Cities. Dr. Jurado said the Task Force would see a draft resolution by September. The project received general support on a conceptual basis by the Water Resources Task Force providing it is reviewed first by the League of Cities for support before moving to the County Commission.

The final presentation was by Steven Bassett, Broward Water Resources Task Force Technical Team member and representative of the South Florida Chapter of the U.S. Green Building Council. Mr. Bassett discussed the water savings that could be realized by better use and reuse of condensate from air conditioning systems. He started with a discussion of some estimates that had been made of how many cooling towers are operating in Broward County, based upon a review of properties from the Broward County Property Appraiser's lists, and how much condensate is generated in Broward County by these towers (estimated 1.9 MGD). He suggested that this condensate could be run back into the cooling towers rather than disposing of it in sewer systems. He also discussed how much cooling tower

blow-down is generated. Blow-down removes minerals from the cooling towers and it was suggested that 2.8 MGD of water may be available from this source. He mentioned that Broward County is the only county that requires blow-down water to be discharged in sanitary sewer systems, which requires additional treatment and cost. He concluded that there are possible water savings of 14 MGD by harvesting cooling tower condensate and blow-down water, and would also save a possible 10 MGD of sanitary sewage treatment. He mentioned the Broward County Convention Center has installed harvesting systems and is greatly satisfied with it. Mr. Bassett provided some recommendations on what could be accomplished through water conservation measures, including incentives vs. mandates, and how to promote water conservation programs. Commissioner Jacobs discussed her support for this type of approach and segued into mentioning appropriate dress codes for workers in South Florida that would allow air conditioning levels to be reduced. Chair Estenoz asked the Task Force they would like to see some additional information by the Technical Team on the cooling tower option. Deputy Mayor Rosen asked for some recommendations and further investigation and the Chair tasked the Technical Team to do this. Discussion ensued and Mayor Flansbaum-Talabisco suggested checking with the U.S. Council of Mayors and the Clinton Climate Initiative for possible funding.

Mr. Bassett made one final remark about Bermuda and how there is no water distribution system there, and cisterns play a major role in the water picture. The Chair closed with some comments about the recent rains and how the level in Lake Okeechobee is rising.

There being no further discussion and comment, the meeting was adjourned at 1:26 PM.

## ATTENDANCE

### **Task Force:**

Lisa Aronson, Vice Mayor, City of Coconut Creek  
Douglas Bell, Chair, Central Broward Water Control District Board of Commissioners  
Richard Blattner, Commissioner, City of Hollywood  
Joy Cooper, Mayor, City of Hallandale Beach  
Shannon Estenoz, Chair and Governing Board Member, South Florida Water Management District  
Beth Flansbaum-Talabisco, Mayor, City of Tamarac  
Glen Hanks, Secretary, Coral Springs Improvement District Board of Supervisors  
Kristin Jacobs, Vice Chair and Commissioner, Broward County  
Jack McCluskey, Commissioner, City of Pembroke Pines  
Charlotte Rodstrom, Vice Mayor, City of Fort Lauderdale  
Donald Rosen, Deputy Mayor, City of Sunrise  
John Sims for Allegra Webb-Murphy, Vice Mayor, City of Oakland Park  
Susan Starkey, Councilmember, Town of Davie

### **Technical Team:**

Steven Bassett, Representative, South Florida Chapter of U.S. Green Building Council  
Jose Calas for Linda Brien, Administrator of Water Facilities Division, FDEP Southeast District  
Hector Castro, Director of Utilities, City of Sunrise  
Heather Cuniff, City Planner, City of Lauderhill

Ray Gagnon, Director of Utilities, City of Tamarac  
David Grey for Hank Breitenkam, Director of Utilities, City of Plantation  
Fran Henderson for Alan Garcia, Director, Broward County Water & Wastewater Services  
Dr. Jennifer Jurado, Director, Broward County Nat. Res. Planning & Mgmt. Division.  
Pete Kwiatkowski for John Mulliken, Director, SFWMD Water Supply Planning Division  
Dylan Larson, Representative, Builders Association of South Florida  
Julie Leonard, Assistant Utilities Services Director, City of Fort Lauderdale  
Joe McLaughlin, Professional Engineer, City of Pembroke Pines  
David Womacks, Public Works Director, City of Oakland Park

**Other Attendees:**

Anita Allen, Broward County Water and Wastewater Services  
Marjorie Craig, SFWMD  
Jean Dupuis, City of Coconut Creek  
Toni Edwards, Broward County Nat. Res. Planning & Mgmt. Division  
Tom Green, City of Wilton Manors  
Barry Heimlich, FAU CUES  
Todd Hiteshew, City of Fort Lauderdale  
Michael Huneke, Broward County Planning and Redevelopment  
Keith London, Commissioner, City of Hallandale Beach  
Jose Lopez, SFWMD  
Carole Morris, SFWMD  
Michael Owens, Broward County Attorney General's Office  
Rudy Rudolph, Broward County Nat. Res. Planning & Mgmt. Division  
Reshma Thummadi, Malcolm Pirnie  
Michael Zygnerski, Broward County Nat. Res. Planning & Mgmt. Division